

given every two hours till 8 A.M., and afterwards every hour. Pupils rather dilated. Could eat porridge, and even some bread, for breakfast this morning. At 3 P.M. the tincture was changed for that which had been used in a previous case, and as it was supposed to be stronger than that which the boy had been taking, the dose was diminished to six drops—a dose which had been effectual in the other case; and it should be remembered that the patients were about the same age, as well as under the same disease. This dose, however, proved insufficient in the case I am now relating; for the patient had a severe fit of opisthotonos at 1 A.M. (15th), and remained rigid for some time thereafter. The dose was therefore immediately increased to eight drops every hour, but even that did not seem to produce the desired relaxation. The tincture formerly used was now resumed in the old dose of fifteen drops, and this was increased to twenty every half hour during the day and every hour during the night.

On the 18th the dose was increased to thirty drops every hour, with good effect. During the last four days the patient gradually recovered from his relapse, apparently caused by the sudden diminution of the dose on the 14th. He had no decided fit of opisthotonos, except the one reported on that day; but he had for a time greater rigidity and opisthotonic starts. He is reported to be much more relaxed on the 18th than he had previously been; but it is noted that rigidity, especially of right limb, occurs when the wounded foot is washed, though that operation is performed in the gentlest way—simply by pouring tepid water over it. It is then laid in clean water dressing.

On the 19th, at 9 A.M., the patient being as above reported, the dose of the tincture was diminished to twenty drops every two hours; and he was ordered four ounces of sherry daily. At 3 P.M. he had two short fits of opisthotonos, and remained afterwards very rigid all over the body. The dose of the bean was therefore again repeated every hour during the day, and by the evening he was once more relaxed in all his muscles, and was able to separate the teeth about an inch. As his pulse was feeble he had then three ounces of brandy, which were given during every night for a time.

Next day he was again rigid and starting more readily, and this state continued during the 20th, though the dose of tincture was increased to thirty drops.

On the 21st, his bowels having been opened by croton oil, I ordered the tincture to be discontinued, as it did not seem to be sufficiently strong to combat the disease in this case, and I prescribed instead of it the alcoholic extract dissolved in spirit. Of this he took a dose equivalent to one-eighth of a grain of the extract every hour, and after three such doses it is reported that he became much more relaxed; and at 10 P.M. he was ordered one-sixth of a grain every two hours during the night, to save waking him too often.

On the 23rd the patient continued to improve, and chewed a steak for dinner. Appetite good, but bowels again confined. He therefore had a dose of castor oil alone (half an ounce), and has continued regularly the doses of the extract prescribed on the 21st.

After this date he improved, though rather slowly, the muscles of the abdomen and back being the last in this case to give way. The dose of the extract was regularly given, and gradually increased till the patient took half a grain every two hours. This was from the 21st of June till the 3rd of July, or twelve days. The effects produced were thorough relaxation of the muscles, occasional vomiting, without any great or at all events long-continued sickness—for the boy had a good appetite all the time,—and a noteworthy change as to the action of purgatives, which at first hardly acted, though strong, and by-and-by acted plentifully, though only of usual strength; latterly none were required at all. I think these circumstances show that, as the drug overcame the tetanus, it began to exhibit its physiological action on the alimentary canal—viz., a degree of irritation indicated by abundant secretion of mucus, and evacuation of both stomach and bowels.

On the 3rd July, therefore, I stopped the administration of the bean entirely, and ordered an increase of stimulants and gentle nourishment. Under this treatment the symptoms just mentioned soon subsided and disappeared. In a few days he could sit up freely in bed. He slept well at night, without even starting, and took his food with relish and ease. The wound of his foot had by this time nearly healed, and by about the middle of July he could rise from bed, and very soon ran about the ward as if he had never been ill. On the 30th he was dismissed cured.

It will not, I think, be questioned by any one that the preceding was an acute case of traumatic tetanus. The patient was admitted to the infirmary on the second day of the dis-

ease, and he had already severe general convulsions. The administration of the bean was at once commenced by Dr. M'Gibbon, my house-surgeon, and henceforward the severity of the disease was mitigated, though in this case its progress was not at first very decidedly checked. The reason of this was twofold. 1st. The smallness of the doses of the bean. I wished to try if we could not counteract the tetanus without throwing the patient into such a state of alarming depression as occurred in my first case; but we found that while these small doses mitigated and checked the violence of the fits, they did not altogether prevent their recurrence. Probably this was very much caused by (2nd) the severity of the disease in this case. I have elsewhere shown that the Calabar bean produces the exact counter-effect on the spinal marrow to the state in which tetanus originates. Hence when the latter is very well marked, so to speak, the former must be the more fully developed. Thus each case must be judged of pretty much by itself, and the doses of the bean proportioned to the severity of the disease in every individual instance. In the case just related the disease was, in my opinion, of a very severe type, and hence it was that the doses of the bean given at first only served to keep it in check. They were not powerful enough to conquer it altogether, and had they been neglected, the disease would soon have shown itself in all the distressing force so familiar to those acquainted with its phenomena. This statement, as well as the fact of the controlling influence of the bean, could not be better illustrated than by reference to the case itself. On the 11th June the patient had a very long sleep, during which the drug was not given from 8 P.M. till 6 A.M., and in consequence the fits recurred, and the rigidity became worse. Again on the 14th and 19th, owing to diminution of the doses, similar relapses occurred. Lastly, the duration of the case was much shortened by the increased strength of the dose towards the end of the treatment, when the extract was used instead of the tincture. Now all these relapses could not be mere coincidences with the diminution of the quantity of the bean taken by the patient. On the contrary, I think that unprejudiced readers will perceive a direct connexion between the diminution of the drug and the relapses, while the increase of the drug and the recovery are also most obviously related as cause and effect.*

(To be concluded.)

ON

THE MECHANICAL TREATMENT OF ORAL DEFORMITIES.

BY ROBERT RAMSAY AND J. OAKLEY COLES, ESQS.

(Concluded from p. 405.)

A DESCRIPTION of the second case, and the way it was treated, may be given in a few sentences. A model of the mouth was obtained in the way already described. The accompanying woodcut (Fig. 5) is an exact model of the case as presented for treatment. In this case there were certain obvious difficulties of a totally different character from those presented in the previous one. Here the bone was entirely gone to the floor of the orbit. Fortunately, however, the entire length of the nasal septum was left intact. But, as it will have been inferred, deglutition was very troublesome, and speech scarcely intelligible.

In operating, the principal difficulty which presented itself was the small surface on which suction could be produced. There was, however, the advantage of a considerable overlap at the posterior portion of the gap. By making an instrument in two parts, as shown in Figs. 6 and 6a, the mouth was so far restored as to be completely efficient for purposes of mastication and articulation. The right hand drawing (Fig. 6a) represents the hard rubber portion carrying the required artificial teeth; while the left hand drawing represents the elastic rubber portion, which served to restore the contour of the countenance and to stop the passage of air and fluid from the mouth to the nares, and *vice versa*. The two parts, as connected by the platina pin (shown in Fig. 6a), are represented in Fig. 7.

* A case of traumatic tetanus has recently been reported which was treated entirely by hypodermic injections of tincture of Calabar bean. The result was quite satisfactory, and forms the seventh case treated by the bean, with only one death.

FIG. 5.

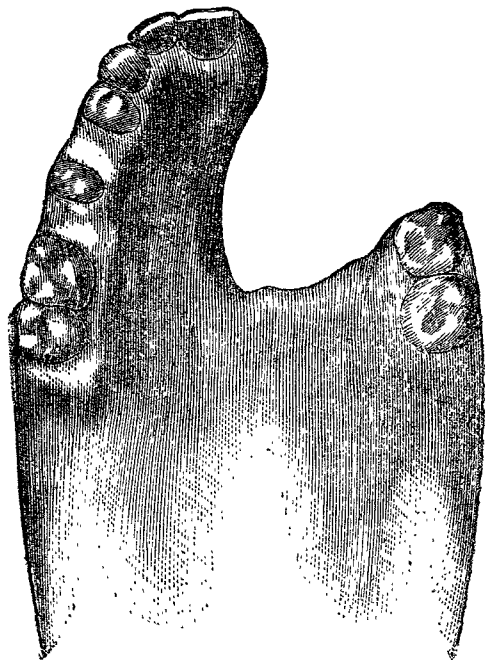


FIG. 6.

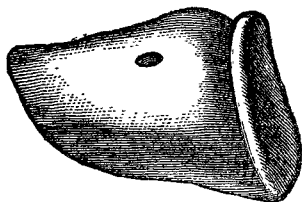


FIG. 6 a.

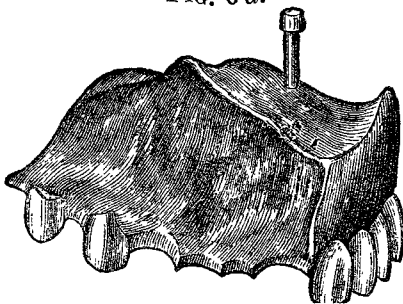
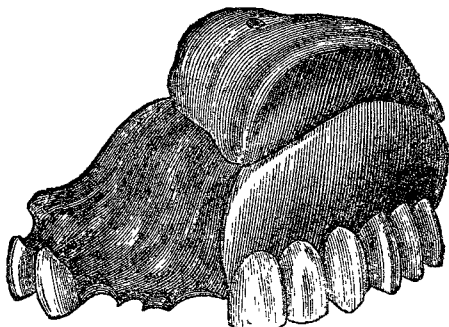


FIG. 7.

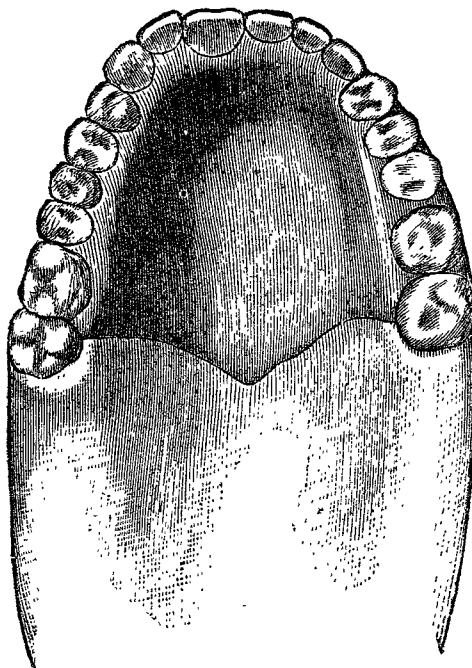


The mouth in its artificially restored form is shown in our last illustration (Fig. 8.)

In conclusion we may briefly revert to one or two important or special points in the required practice attending these cases. The great advance made in treating them is largely—indeed, we may say, almost entirely—owing to the introduction of vulcanised rubber into this country. The various qualities into which this substance can now be tempered are a great triumph for scientific inquirers and of artistic skill. It is now so perfectly prepared that it may be used in the mouth without unpleasantness or danger. When hardness is required, it can be made as rigid as bone; and when suppleness is necessary, it can be made so soft and velvety as exactly to resemble the part of the body for which it is required to act as a substitute. While, too, this elasticity and softness are imparted, so springy does it become that no reasonable amount of pressure will prevent it, on being again set free, from returning to the exact form it was of when taken from a mould.

Another important point is the method of depending on suction for the support of these instruments, instead of trusting to natural teeth for a bearing, which must in consequence be ultimately injured. This is a step in advance in conservative dentistry which has not yet been sufficiently recognised. And not less so is the practice of taking impressions in plaster of Paris, instead of wax and other old- and new-fashioned plastic compositions.

FIG. 8.



With these agents at his command, and the required skill in using them, the dental surgeon may treat almost every case of deformity to which the mouth, from accident or disease, is liable.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MARCH 24TH, 1868.

HENRY LEE, F.R.C.S., VICE-PRESIDENT, IN THE CHAIR.

A PAPER from Dr. CHRISTIE, of the North Riding Asylum, Clifton, on a

CASE OF DEFICIENT CORPUS CALLOSUM,

was read. A patient, aged twenty, died; and it was found at the autopsy that the corpus callosum was wanting. He had been idiotic and without the power of speech from birth. The calvaria was small, dense, and shelving off considerably in the anterior portion. The encephalon was very small, and weighed only 28½ oz. The specific gravity of the grey matter was 1040, and of the white 1045.

Dr. BALLARD thought the absence of the body was pathological, not congenital.

Dr. WEBSTER spoke of the rarity of such cases in the insane.

Dr. MERYON observed that there ordinarily was defect of mind in these cases, which had an important bearing on the question of aphasia. In two cases reported by Mr. Paget and by Mr. Solly respectively the power of speech was present; in all others it was absent. Abercrombie's cases went on to complete loss of mind.

NOTES RESPECTING NON-UNITING FRACTURES.

BY GEORGE W. CALLENDER,

ASSISTANT-SURGEON TO AND LECTURER ON ANATOMY AT ST. BARTHOLOMEW'S HOSPITAL.

After referring to the statements made by Amesbury and Hamilton respecting non-uniting fractures, the author relates a series of cases to show that the union of a broken bone is never prevented, although it may be delayed, by constitutional causes. Instances are given of the repair of fractures in cases of recent and long-standing paralysis, and cases of non-union occurring during childhood are incidentally referred to. The results of the treatment of fractures at St. Bartholomew's Hospital during the past seven years are mentioned; also the history of a case of non-uniting fracture of the thigh, and cases of non-union from special local causes. It is concluded that three well-defined varieties must be enumerated of fractures which fail to unite:—

1. Fractures, not inaptly termed spontaneous, which ensue from diseases of bone; in which it is evident that no union is likely to take place.